

We claim:

1. A generalized color calibration architecture comprising:

a first interface to receive raw measuring data of a sample from a measuring tool, the data having a color data type, the sample having one or more color targets on

5 which basis color calibration of a device is to be performed, each color target having an arrangement of one or more color patches;

a second interface to receive a color calibration approach, the color data type, one or more target identifiers specifying the one or more color targets, and a color patch order for each target identifier specifying the arrangement of the one or more color

10 patches of a corresponding one of the one or more color targets; and,

a color calibration manager to perform the calibration based on the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier, according to the color calibration approach, the calibration one of yielding and updating one or more color conversion tables for subsequent use

15 with the device.

2. The architecture of claim 1, further comprising a data converter to convert the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier to formatted data for input to the color calibration manager.

20 3. The architecture of claim 1, further comprising a color calibration algorithm library having one or more color calibration algorithms for calling by the color calibration manager to one of generate and update the one or more color conversion tables.

4. The architecture of claim 3, wherein the one or more calibration algorithms comprise a linearization color calibration algorithm and a neutral-axis color calibration algorithm.
5. The architecture of claim 1, wherein the measuring tool comprises one of: an embedded device sensor, a densitometer, a colorimeter, and a spectrophotometer.
6. The architecture of claim 1, wherein the second interface comprises a user interface.
7. The architecture of claim 6, wherein the user interface comprises a graphical user interface.
- 10 8. The architecture of claim 1, wherein the color data type comprises one of: a luminance data type, a CIEXYZ data type, a CIELAB data type, and a spectrum data type.
9. A generalized color calibration method comprising:  
printing by a device a sample having one or more color targets on which basis  
15 color calibration of the printer is to be performed, each color target having an arrangement of one or more color patches;  
measuring by a measuring tool raw measuring data of the sample having a color data type;  
inputting a color calibration approach, the raw measuring data, the color data type,  
20 one or more target identifiers specifying the one or more color targets, and a color patch order for each target identifier specifying the arrangement of the one or more

color patches of a corresponding one of the one or more color targets;

performing the color calibration of the printer based on the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier, according to the color calibration approach, the color calibration

- 5 one of yielding and updating one or more color conversion tables for use with the printer during subsequent printing; and,

outputting the one or more color conversion tables.

10. The method of claim 9, further comprising, prior to performing the color calibration, converting the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier to formatted data.

11. The method of claim 9, wherein performing the color calibration comprises calling one or more color calibration calls from a color calibration call library of color calibration calls, to one of generate and update the one or more color conversion tables.

- 15 12. The method of claim 9, wherein measuring by the measuring tool comprises measuring by an embedded sensor of the printer, substantially concurrent with printing the sample by the printer.

13. The method of claim 9, wherein measuring by the measuring tool comprises measuring by a tool external to the printer, after printing the sample by the printer has
- 20 been completed.

14. The method of claim 9, wherein inputting the raw measuring data comprises receiving the raw measuring data from the measuring tool through a measuring tool interface.

15. The method of claim 9, wherein inputting the color data type, the one or more target identifiers, and the color patch order for each target identifier comprises receiving input from a user through a user interface.

16. The method of claim 9, further comprising repeating the method.

17. A computer-readable medium having a computer program stored thereon for execution by a processor of a computerized device, the computer program comprising:

first interface means for receiving raw measuring data of a sample output by a device from a measuring tool, the data having a color data type, the sample having one or more color targets on which basis color calibration of the device is to be performed, each color target having an arrangement of one or more color patches;

15 second interface means for receiving a color calibration approach, the color data type, one or more target identifiers specifying the one or more color targets, and a color patch order for each target identifier specifying the arrangement of the one or more color patches of a corresponding one of the one or more color targets; and,

20 color calibration means for color calibrating the device based on the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier, according to the color calibration approach, and for one of yielding and updating one or more color conversion tables for use with the device during subsequent use.

18. The medium of claim 17, further comprising means for converting the raw measuring data, the color data type, the one or more target identifiers, and the color patch order for each target identifier to formatted data for input to the color calibration means.

5 19. The medium of claim 17, wherein the computer-readable medium is at least part of a firmware of the device, the device being the computerized device, the processor of which executes the computer program.

20. The medium of claim 17, wherein the computer-readable medium is a part of a computer communicatively coupled to the device, the computer being the  
10 computerized device, the processor of which executes the computer program.